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## AMATEUR RADIO

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## EDITORIAL



## GROWTH

THE Amateur population of Australia is growing. From some 3,000 in 1957, it is now over the 4,000 mark in 1961—this is quite a spectacular increase by all standards, but it may be even more surprising to learn that in other countries, such as Japan, the growth has been even more prolific. There, in a period of some three years, the population has grown from 3,500 to over 6,000—nearly double. In approximately the same proportions, the W.I.A. and the J.A.R.L. have also increased their memberships, but the Institute has now lost its status as the largest Amateur Society in Region 3. Our aim should be to reclaim that status.

The popular catch phrase—"It pays to advertise"—has always been enunciated as a healthy policy of the Institute, but it was substantiated with a vengeance a few weeks ago. It started from a short article on Amateur Radio in the January Reader's Digest. This excellent publication has a wide distribution throughout Australia and its articles are read by thousands of people and it was gratifying to the Institute that nearly 70 of its readers wrote asking for more details of our universal hobby. These enquirers were widely spread throughout the Commonwealth, and such a response to one short article was unexpected. Naturally your Executive took this opportunity to

endeavour to recruit some new members from those interested enough to enquire.

This wonderful response produced a counter reaction—it pointed out that there are still many citizens in Australia and elsewhere who have no idea at all what Amateur Radio means or represents. Whilst it is always pleasant to receive free publicity from unsolicited sources, the matter rests squarely on our own shoulders to promote our own advertising and recruit drives. The Divisions have done a good job in the last few years in maintaining our membership and in most cases of increasing it. However, no one would be foolish enough to say that more could not be done in this direction.

If our Institute, the oldest Amateur Radio society in the world, is to maintain the status we hold and to continue to grow, we must be prepared to engage in even more strenuous efforts to obtain new members. If every member of the Institute publicises the work and worth of the Amateur in his business and social activities, and obtains only one new member, then our present strength in a very short time will be doubled. The veracity of the phrase—"It pays to advertise"—will then be ideally demonstrated.

FEDERAL EXECUTIVE.

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# HIGH STABILITY V.F.O's. OF RECENT DESIGN\*

YUIFR introduces Amateurs to some new European ideas on extremely stable v.f.o's.

TIMA POPOVICH, YUIFR, ex-YU7BJ

In spite of the wide commercialisation of Ham gear these days, there are still enthusiasts who prefer to build their rigs at home. But, if only for the sake of our own edification, it will do no harm to discuss a few of the recent improvements in oscillator design, in some detail.

The problem of obtaining high frequency stability in variable frequency oscillators always presents a hard nut to the constructor, and not only to the Amateur constructor. No wonder that many efforts were made throughout the years, particularly since W.W. II. (both by Amateurs and Manufacturers) to develop and improve oscillator design in such a way as to approach stability characteristics close to those of crystal controlled oscillators.

There are a few oscillator types, developed experimentally by the laboratories of some radio manufacturing firms, in which frequency stability in continuous operation goes up to  $\pm 0.001$  per cent. Because of their great stability and relatively simple design, these devices are quite tempting to the Amateur builder, too. Of course, built with Amateur resources, similar devices will be less perfect, but still superior to the conventional oscillators.

Basically, all these circuits are of the electron coupled type with certain experimentally developed improvements.

## CZECH TESLA OSCILLATOR

The Czechoslovak "Tesla" laboratories have developed an oscillator which presents considerable improvements over the popular series tuned Colpitts (better known as the Clapp circuit). Just as in the case of the Clapp, the coupling between the oscillating tank circuit and the tube is very loose. However, an important improvement is the fact that, unlike the Clapp, not only is the input capacitance of the tube shunted by capacitors of large value, but also the other interelectrode capacitances. This results in better stability by eliminating tube interelectrode capacity changes, as well as changes due to fluctuations of electrode voltages.

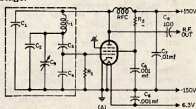
This oscillator is characterised by a remarkable frequency stability and low harmonic content, as well as constant output power over an extended frequency range.

The high stability of the "Tesla" oscillator offers the possibility of building it for any desired band without resorting to frequency doubling or tripling, usually necessary in compact mobile equipments.

The schematic diagram and component data, as presented by the Roumanian magazine, are shown in Fig. 1. The tuned circuit data is listed in the table.

Tuning is accomplished by the variable capacitor C9. Better results are obtained by using a ganged, double section capacitor, whose second section C10 should be connected across C1. This, however, involves more complicated construction. The range of bandspread depends upon the values of the capacitors C1, C2, C3, C4 and C9.

Coil inductances are adjusted by powdered iron cores. The Table contains data for six different Amateur bands, and the values for the 72-73 Mc. frequency range are given to make possible the coverage of the 144-146 Mc. band by doubling in a subsequent stage.



acitor (from oscillator plate to the following stage) should not exceed 100 pF. in value.

For break-in operation the oscillator may be keyed in the cathode circuit.

For the 72-73 Mc. band, C4 is the tuning capacitor.

## CLAPP-FRANKLIN OSCILLATOR

Another factory conceived high-stability oscillator, successfully built and employed by some European Amateurs, is the so called Clapp-Franklin oscillator, developed by the German Telefunken laboratories.<sup>2</sup>

As the name itself indicates, this design combines the good properties of

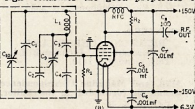


Fig. 1—The "Tesla" oscillator circuits and L/C charts developed in a Czechoslovak laboratory. Circuit A uses a single tuning capacitor while B employs a dual unit, C9 and C10.

Band Mc.	L1 $\mu$ H	No. of Turns	Wire Gauge No. B & S	Tuning with Single Capacitor C9					Tuning with Two Gang Capacitor C9-C10				
				C1 $\mu$ mf	C2 $\mu$ mf	C3 $\mu$ mf	C4 $\mu$ mf	C5 $\mu$ mf	C1 $\mu$ mf	C2 $\mu$ mf	C3 $\mu$ mf	C4 $\mu$ mf	C5 $\mu$ mf
1.8—2.0	25.0	46	33	365	30	4890	470	250	500	25	5000	560	115
3.5—3.8	13.0	33	28	285	20	2690	250	125	245	12	2350	235	75
6.8—7.15	7.0	24	24	140	10	1470	130	11.0	134	7	1250	125	6*
14.0—14.35	3.5	17	22	68	5	760	68	11.0	62	5	600	57	7
21.0—21.45	2.5	14	20	44	3	475	37	5.5	41	2	350	38	7
28.0—29.7	1.7	12	18	31	3	360	20	11.5	26	2	210	21	7
72.0—73.0	0.7	1.7	14	8.5	—	130	2.8	1.5	7	—	150	2.8	2

\* L1 wound on 15 mm. diameter form (0.5905 inches).

† Original article shows C5 as 0  $\mu$ mf. This is probably an error, suggests Timu, and should be in the vicinity of 10  $\mu$ mf.

Table 1—Component values for the single and double tuned Tesla oscillators shown in Fig. 1. The 72-73 Mc range is provided for doubling, in a subsequent stage, to the 144-146 Mc band.

Tubes recommended are 6AK5, 6AC7 or similar types. Certain dual triodes may also be used. In this case, one of the triodes serves as the oscillator, while the other one is used as an amplifier. For good results, only high quality components should be used.

The tuned circuit is housed in a shielded box. Special care must be taken to provide mounting of the components to permit spacing the coils well away from the sides of the box (at least two times the diameter of the coil), to prevent drastic reduction of its Q by the shielding.

Resistor R2 is chosen within the limits of 1,000-10,000 ohms. Upon its value depends the coefficient of harmonics at the oscillator output.

The value of R1 is chosen between 27,000-75,000 ohms. The coupling cap-

acitor and Franklin oscillators into one unit, tending at the same time to minimise their respective deficiencies.

The Franklin circuit, shown in Fig. 2(A) contains two tubes, one of which acts as the oscillator proper, while the second one serves as an amplifier and phase inverter. Values of the components are chosen so as to ensure a very loose coupling between the oscillating tank circuit and the tube, just as in any high stability unit. As a result of the negligible influence of the tube elements on the frequency generating tank circuit, the frequency stability of the Franklin oscillator comes comparatively close to that of a crystal controlled unit. The amplified feedback voltage

\* Reprinted from "CQ," December, 1960.

<sup>1</sup> "Radioamatorul," February, 1957, p. 24. Official publication of A.V.S.A.P., Bd. Dacia 13, Bucharest, Roumania.

<sup>2</sup> YOSFT, "Radioamatorul," March, 1957, p. 16.



is returned to the grid through a small capacitance.

In the Clapp circuit, shown in Fig. 2(B) a high Q circuit is assured in a somewhat different way. The tube is tapped across only a small portion of the oscillating tank circuit by means of a capacitive voltage divider consisting of three capacitors in series across the coil. The resulting tank circuit has a high L/C ratio, thus providing a low tank current. In addition, the values of C1 and C2 are quite high compared to the tube capacitances. Hence, possible changes of tube interelectrode capacitances during operation cannot appreciably affect the frequency of the tank circuit.

The greatest shortcoming of the Clapp circuit rests in the low value of the radio frequency output voltage generated, which is dependent upon the setting of the series tuning capacitor. This results in uneven excitation of the following stages. The broader the band, the more pronounced the undesirable effect.

This inconvenience is overcome in the Telefunken circuit by combining the Clapp and Franklin circuits.

As shown in Fig. 2(C) the feedback voltage is not applied to the grid of the oscillator tube, as in the Franklin circuit, but to the junction of the two

voltage dividing capacitors, C1 and C2. The use of the conventional parallel tuned tank circuit produces a constant output power over a broad frequency range. This in turn provides level excitation of the following stages.

Fig. 2(D) shows the schematic of the tried and proven oscillator developed at Telefunken.

The resonant tank circuit is tuned to 3.5 Mc. The output power is approximately 1 volt effective, and output impedance is 100 ohms. For better thermal compensation, C1 is made up of combination of two parallel ceramic condensers, 15 pF. and 35 pF. respectively.

Tubes V1 and V2 may be triodes, or triode connected pentodes. A dual triode having separate cathodes can also be used.

Tube V3 is a high conductance pentode in a cathode follower circuit. The plate of this tube is shorted to ground for r.f. by a 5,000 pF. ceramic capacitor. Capacitor C2 is also ceramic, while C3, C4 and C5 are mica.

For the required inductance of 21  $\mu$ H. the oscillator coil should be 25.5 turns of No. 24 wire on a ceramic form 1 1/2 inches in diameter.

For wiring, No. 18 (or larger) wire is recommended. Particular care should be given to mechanical stability and rigidity of the entire unit, as well as to the quality of the components.

The unit should be placed in a metal box, lined with two or three layers of heat insulating material.

#### RADOSLAV CIRCUIT

The v.f.o. circuit to follow is an Amateur design presented by Rakar Radoslav in the "Radioamater" magazine,<sup>3</sup> the official publication of the Yugoslav Amateur Radio Union (S.R.J.).

Figures 3(A) (B) and (C) illustrate how subsequent improvements were developed in the famous e.c.o. and Clapp circuits, by retaining and combining their desirable properties.

The resulting oscillator circuit has a crystal-clear note of constant pitch, excellent frequency stability characteristics and the device is easy to build.

The improvements in the e.c.o. and Clapp circuits are as follows:

(a) In the Clapp circuit, the capacitive voltage divider connected between the grid and ground does consume a certain amount of the already small energy available at the grid. In the newly developed circuit the cap-

active voltage divider is connected between the plate of the oscillator tube and ground. The amount of r.f. energy available at the plate being much higher, the possible effect of losses upon the circuit are of little consequence.

(b) In the Clapp circuit the suppressor grid serves as an electrostatic shield inside the tube, provided a pentode is used. In this circuit this is accomplished by the control grid with improved frequency stability.

(c) In the Clapp circuit the capacitances forming the capacitive voltage divider reach 1,000 pF. in value, while in this circuit they are of 2,000 pF. each. This insures a better cancellation of the results of changes in interelectrode capacitances during operation.

(d) In the Clapp circuit only the grid to cathode capacitance is shunted by a large capacitor, while in this circuit changes in all the interelectrode capacitances of the tube (grid-vathode, grid-plate, plate-cathode) are cancelled out.

(e) The working quality of the Clapp circuit, according to its designer:

$$N = 10 \sqrt{\frac{9 G_{uQ}}{f C_n}}$$

while in this circuit:

$$N = 10 \sqrt{\frac{9 G_{u\mu}}{f C_n}}$$

Where: N is quality of the circuit.

$G_u$  is tube transconductance.

Q is the quality factor of the inductance.

f is the operating frequency.

$C_u$  is the resulting capacitance of the capacitive voltage divider and minimal capacity of the series tank circuit.

$\mu$  is the amplification factor of the second tube.

Reference to the above equations indicates that, in this circuit, the highest usable frequency, conditions and quality of the components being equal, is considerably higher than with the Clapp.

Further advantages of this circuit in comparison with the conventional types of oscillators follow:

- ★ The cathode coupling system insures a very strong feedback of the current type, which is constant over a broad frequency range;
- ★ The output voltage has a medium amplitude of purely sinusoidal shape;
- ★ The separation is purely electronic;
- ★ The stability of the unit is comparable to that of a crystal controlled unit.

Fig. 3(C) shows the effective circuit diagram of the v.f.o.

It works on the following principles: When the high voltage is applied, oscillations will take place in the series tank circuit LC. Since the two 2,000 pF. capacitors (which serve to nullify changes in interelectrode capacity) are connected across the tank circuit, a current flows through the resulting capacitive voltage divider, bringing about voltage drops equal in value but opposite in phase across each of its elements. Thus, at the point at which the grid of V2 is connected to the capacitive voltage divider the h.f. potential is zero. Since the voltages at the extrem-

(Continued on Page 7)

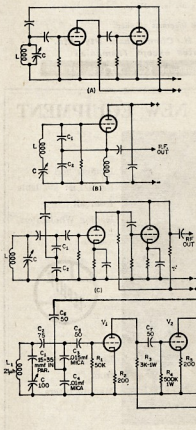


Fig. 2—A—The basic Franklin circuit. B—The basic Clapp circuit. C—Fundamental circuit of the combined Clapp-Franklin oscillators. D—The circuit of the Clapp-Franklin oscillator as developed at Telefunken.

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D.C. Output Power: 60 watts maximum.  
D.C. Input Current: 5.9 amps. at 60W. output.  
D.C. Output Voltages (14 V. in.): 400, 300, 200 or 150 V.;  
400 & 200 simultaneously or 300 & 150 simultaneously.  
D.C. Output Current: 150 mA. maximum total from full  
and half voltage taps or 150 mA. each if switched to  
alternate loads.

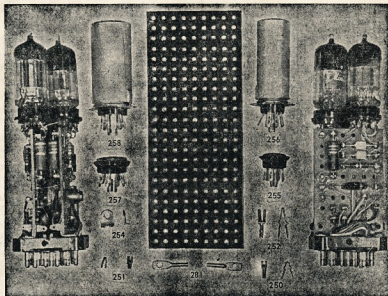
Efficiency: 78% at 60 watts output.  
Operating Frequency: 1 Kc/s.  
Maximum Operating Temp. (i.e. ambient air temp. at  
point of installation) 150°F. (approx. 65°C.).  
Filtering: Adequately filtered in full voltage output  
lead and provision for filtering in half voltage output.  
Dimensions Overall: 8 in. x 3½ in. x 3½ in.  
Mounting: Universal type.  
Full Instructions and Circuit Diagrams supplied.

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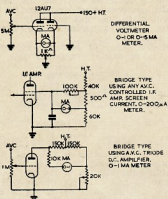


ply having a change-over switch system to enable transmit and receive operation.

A word or two of warning! Don't strain the ceramic shafts on the tuning condensers in the receiver. They will break if handled roughly. Run the equipment on lower than 300v. h.t. rather than above this figure as the condensers fitted in a lot of 522s are very prone to voltage failure.\* If you modify the receiver for continuous tuning, don't fail to disconnect condensers 202.13 and 202.14 or else you'll get no oscillation. Try to obtain correctly sized Bristo keys to remove the tuning head flexible couplings as substitute tools usually ruin the grub screw. The output transformer may be replaced by a 3.2 ohm output transformer. If this is done, remember transformer 296 contains an h.t. choke and if removed the h.t. line must be rejoined.

If you possess a BC624C receiver, practically no modification of the receiver audio will be required. The interphone transformer 295 may be removed and if desired an extra tube may be added to operate an S meter—see suggested circuit.

\*S METER CIRCUITS



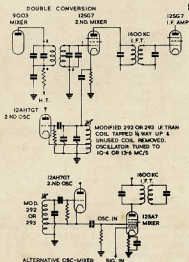
The BC624AM receiver may be further improved by using the 125G7 2nd audio stage as a voltage amplifier to drive a power output stage employing a 12A6, 12AQ5, etc. This may be accommodated in 295's position. The crystal oscillator half of the 12AH7GT is available for S meter use.

The BC624A requires most modification and perhaps the best approach here is to modify it to BC624C standard, plus extras to your own desire.

Double conversion may be included by removing 296 and substituting 292 or 293 to this position. Modify one of the i.f. windings of the re-located i.f.t. by providing a tap on the winding. Use the modified winding to provide a second local oscillator by (a) using a triode-hexode or multi-grid converter tube in place of the 2nd i.f. amplifier (12SG7), (b) use the 4, 5, 6 section of the osc./squench 12AH7GT twin-triode as a "hot cathode" Hartley oscillator and use cathode injection to the 12SG7 2nd i.f. amp. for mixing.

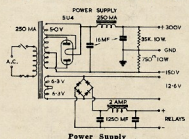
Remove all 12 Mc. i.f.s. other than 291 and install a 1600 Kc. i.f.t. in each of the three vacated positions. Dis-

connect the a.v.c. feed to the new mixer stage, but retain it on the first stage of 1600 Kc. i.f. If any tendency towards blocking becomes apparent in operation, apply partial a.v.c. to the second 1600 Kc. i.f. amplifier. A 455 Kc. i.f. could be used instead of 1600 Kc. If this is done, pay attention to the second oscillator stability or, alternatively, provide a small trimmer facility for oscillator drift correction. If excessive selectivity is apparent using 455 Kc. i.f.s., stagger tune the 455 Kc. train.



In the event that you prefer to build rather than modify equipment, the 522 is still a good buy! A host of good quality components may be salvaged—the modulation transformer and driver transformer are an ideal mobile combination. Components ex 522s have been used in 500's, oscillators, monitors, transmitters, etc., etc. Coils 227.1-4 are excellent 7 Mc. coils!

If you have any queries on components or circuit parameters, or if you require further information on this equipment you may write to me [enclosing a stamped addressed envelope.—Ed.] and I will endeavour to help.



NOTE:—

1. If fixed bias retained in transmitter, use circuit shown with 380-0-380V. transformer.
2. If grid leak bias used in transmitter earth transformer centre tap and first electrolytic and omit 750 ohm resistor, use 285-0-285V. transformer.
3. Use selenium or silicon rectifiers for relay supply. Remove all relay earth returns and complete relay circuits via common negative line. Both any positive and negative lines must be above earth.

## GENERAL CHARACTERISTICS AND INFORMATION

### Transmitter Metering

Switch Position	Reading Obtained	Normal
1	1st harm. amp. plate	0.4
2	2nd harm. amp. plate	0.5
3	Power amplifier plate	0.63
4	R.F. diode—if fitted	0.3-0.5
5	P.A. grid current	Full scale

### Receiver Selectivity

The receiver i.f. selectivity is such that a bandwidth of 110 Kc. exists for 6 db. attenuation. 20 db. attenuation results at 90 Kc. either side of resonance, whilst 40 db. attenuation is achieved 130 Kc. from resonance.

### Receiver Sensitivity

The receiver sensitivity over the tuned range averages 3.3 to 6 microvolts for 10 mW. output at 10 db. signal to noise ratio.

### A.V.C. Characteristics

The receiver audio output will not vary in excess of +8 db. for a change in signal input from 20 to 100,000 microvolts under normal conditions. An output variation of +12 db. is given as the maximum acceptable test figure. The output at 20 microvolts input is rated as 0 db.

### Image Rejection

The image rejection ratio at 145 Mc. is given as 17,000 to 1.

### Transformers

A.F. Input 295: Prim. 1—pins 1 and 2; d.c. resistance 920 ohms; Z = 250,000 ohms. Receiver audio input.

Primary 2—pins 3 and 4; d.c. resistance 6.9 ohms; Z = 750 ohms. Dynamic mike intercom. input.

Secondary 1—pins 5 and 6; d.c. resistance 2,450 ohms; Z = 1 megohm. Grid drive.

Audio Output 296: Primary—pins 1 and 2; d.c. resistance 870 ohms; Z = 15,000 ohms. Plate load.

Tapped Secondary—pins 4, 5, 6 and 7; d.c. resistance 390 ohms; Z terms. 4-7, 4,000 ohms; terms. 4-6, 300 ohms; terms. 4-5, 50 ohms. Audio output.

H.T. choke—pins 2 and 3; h.t. filtering, 6 H., 340 ohms d.c. resistance.

Mike Input 158: C.T. primary—pins 3-2-1; Z = 200 ohms; d.c. resistance 5.2 ohms. Centre tapped microphone input.

Secondary—pins 5-4. Z = 420,000 ohms; d.c. resistance 4,000 ohms. Grid drive. 60 cycle test,  $\pm 2$  db. 300-3,000 cycles. Level -40 db.

Interstage Audio 159: Primary—pins 2-1. Z = 125,000 ohms; d.c. resistance 1,650 ohms. Shunt plate load.

C.T. secondary—pins 3-4-5. Z = 500,000 ohms; d.c. resistance 2,750 ohms. Push-pull grids. 60 cycle test,  $\pm 2$  db. 400-3,000 cycles. Level 0 db.

Modulation Transformer 160: C.T. primary—pins 3-2-1. Z = 22,000 ohms; d.c. resistance 690 ohms.

Secondary—pins 4-5. Z = 5,500 ohms; d.c. resistance 170 ohms.

### Relays

130: Slow release relay. No information available.

131: D.p.d.t. and s.p.s.t., 150 ohms. 12v. d.c., normally de-energised, contactor (m.c.v. tone) relay.



161: S.p.s.t. 200 ohms. 12v. d.c., opens when energised, press to transmit control.

412: D.p.d.t., one section has extra contact to ground receiver on transmit. 150 ohms, 12v. d.c. Antenna change-over.

246: S.p.s.t., 5,000 ohms. 4 mA. operates with current change of 0.2 mA. Squelch relay.

411 and 2: 13½v. d.c. Locking. S.p.d.t. 1 locking relay, 2 motor control.

Next time I will discuss the MN26 Compass equipment. Anyone having a pet-mod. he'd like to pass on could drop me a line and it will be included.

As it is intended that this series of articles, describing disposals equipment should provide for the maximum demand, you are requested to write me if you wish a particular unit to be featured. The list of available information covers most popular releases, so drop a line and state your needs.

★

## BOOK REVIEWS

### A.R.R.L. ANTENNA BOOK

A most comprehensive treatise on Amateur antennas. 318 pages packed with all the latest information on antennas and matching systems for fixed and mobile stations.

The 1960 edition is one of the standard A.R.R.L. publications which is revised from time to time. It is a book which should be in the library of every Amateur. Published by the A.R.R.L., Australian price 31/- plus 1/6 postage.

Our copy from McGill's Authorised Newsagency, 183 Elizabeth St., Melbourne, Vic.

### SURPLUS RADIO CONVERSION MANUAL, VOL. 3

For a number of years I have had Volumes 1 and 2 in my library and I have found their cost low in relation to their value as they give much valuable information on a large number of items which are available on the Australian disposals market.

This new volume goes into more detail on a lot of modifications that are not covered in the other volumes. Almost forty disposals items are covered including the conversion of a BC458 into a phasing type s.s.b. transmitter capable of over 100 watts peak power output on 3.5 or 14 Mc.

Published by Editors and Engineers of U.S.A. and edited by William I. Orr. Australian price 33/6 plus 1/- postage.

Our copy from McGill's Authorised Newsagency, 183 Elizabeth St., Melbourne, Vic.

★

### "A Guide to Amateur Radio"

Copies of the eighth edition of this excellent publication of the Radio Society of Great Britain are available from the Federal Treasurer, Bob Boase, VK3NI, 65a Franklin Street, Melbourne, at 5/-, post paid. Among the subjects covered are design and operation of communications receivers (including suppressed carrier reception), power supplies, transmitter design and operation, keying, telephony, aerials, frequency measurement, and other aspects of Amateur operation. There is also a great deal to interest the beginner and the person contemplating breaking into Amateur Radio.

## HIGH STABILITY V.F.O.'s. OF RECENT DESIGN

(Continued from Page 3)

ities of the series tank circuit are opposite in phase, the control grid of V2 is opposite in phase with the plate of V1.

The voltage at the control grid of V2 changes its bias, and after being amplified in the cathode circuit, excites V1, which inverts the phase and acts as a grounded grid amplifier. After the phase inversion, the h.f. oscillations are added to those of the plate circuit of V1 and boost the oscillations in the LC circuit. The h.f. output can be drawn through a 100 pF. capacitor from either the plate of V1, or that of V2. If the output of V2 is to be used, the tank circuit LIC1 can be tuned to any desired higher harmonic of the fundamental frequency. In this latter case, V2 serves either as a buffer, or as a frequency multiplier. A resonant choke can be substituted for the LIC1 tank circuit if preferred.

Fig. 3(D) presents the same circuit using pentodes instead of triodes.

It is desirable, although not a strict necessity, to use voltage stabilisation in power supplies with all the above v.f.o. units.

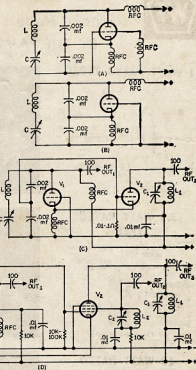


Fig. 3—A—B—C—The development steps in the oscillator designed by Rotor Rodaslov. Output may be taken from V1 or V2 as explained in the text. D—A pentode version of the oscillator shown in C above.

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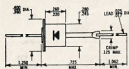


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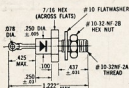
All dimensions in inches



Ratings and Characteristics at 25°C Ambient

JETEE TYPE	INT'L TYPE	ZENER VOLTAGE RANGE	TYPICAL DYNAMIC RESISTANCE		IZ MAX.	NOMINAL TEMP. COEFFICIENT %/°C
			VOLTS	Ω		
1N1518	12 3.9	3.6-4.3	50	9	250	-.04
1N1519	12 4.7	4.3-5.1	40	8.5	200	0
1N1520	12 5.6	5.1-6.2	35	5.5	175	+.03
1N1521	12 6.8	6.2-7.5	30	1.6	150	+.05
1N1522	12 8.2	7.5-9.1	25	1.1	120	+.06
1N1523	12 10	9.1-11	20	1.5	100	+.07
1N1524	12 12	11-13	15	2.4	80	+.075
1N1525	12 15	13-16	13	5.4	65	+.08
1N1526	12 18	16-20	10	11	55	+.085
1N1527	12 22	20-24	9	18	45	+.09
1N1528	12 27	24-30	7	28	35	+.095

## 3.5 WATT RATED TYPES



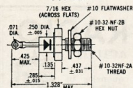
All dimensions in inches



RATINGS AND TYPICAL CHARACTERISTICS

JETEE TYPE	INT'L TYPE	ZENER VOLTAGE RANGE	TYPICAL DYNAMIC RESISTANCE		IZ MAX.	NOMINAL TEMP. COEFFICIENT %/°C
			VOLTS	Ω		
1N1588	32 3.9	3.6-4.3	150	2.6	850	-.04
1N1589	32 4.7	4.3-5.1	125	2.3	700	0
1N1590	32 5.6	5.1-6.2	110	1.4	625	+.03
1N1591	32 6.8	6.2-7.5	100	.58	525	+.05
1N1592	32 8.2	7.5-9.1	80	.5	425	+.06
1N1593	32 10	9.1-11	70	.7	350	+.07
1N1594	32 12	11-13	50	1.4	275	+.075
1N1595	32 15	13-16	40	3.4	225	+.08
1N1596	32 18	16-20	35	6	200	+.085
1N1597	32 22	20-24	30	9	160	+.09
1N1598	32 27	24-30	25	13	125	+.095

## 10 WATT RATED TYPES



All dimensions in inches



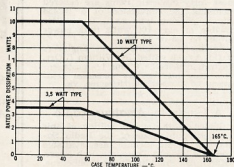
RATINGS AND TYPICAL CHARACTERISTICS

JETEE TYPE	INT'L TYPE	ZENER VOLTAGE RANGE	TYPICAL DYNAMIC RESISTANCE		IZ MAX.	NOMINAL TEMP. COEFFICIENT %/°C
			VOLTS	Ω		
1N1599	102 3.9	3.6-4.3	500	.84	2500	-.04
1N1600	102 4.7	4.3-5.1	400	.68	2000	0
1N1601	102 5.6	5.1-6.2	350	.3	1750	+.03
1N1602	102 6.8	6.2-7.5	300	.2	1500	+.05
1N1603	102 8.2	7.5-9.1	250	.25	1200	+.06
1N1604	102 10	9.1-11	200	.55	1000	+.07
1N1605	102 12	11-13	170	.95	850	+.075
1N1606	102 15	13-16	140	1.5	650	+.08
1N1607	102 18	16-20	110	2	550	+.085
1N1608	102 22	20-24	90	3	450	+.09
1N1609	102 27	24-30	70	4.5	350	+.095

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ALL  
STANDARD  
TYPES  
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RP97

# 11th ANNUAL CONVENTION OF N.S.W. DIVISION, W.I.A.

## SUCCESSFUL THREE-DAY GATHERING

The 11th Annual Convention of the N.S.W. Division was held over the week-end of January 27-28-29, commencing with the general meeting at Science House, Gloucester Street, Sydney, at which there were quite a few who did not normally attend such meetings owing to their geographical locations.

The main part of the Convention took place on the following day at the home of VK2WL, the headquarters station of the N.S.W. Division, located in a bush setting at Dural, some 25 miles from Sydney. The day was perfect, if a little on the hot side, and from early morning there were many helpers on the site assisting in the preparations for the function. Much of the preparation for such an event as this had been done over the period of many months, usually by the few enthusiasts who gather at Dural each Sunday, and it is always pleasing to the Convention Committee to see others arrive early to assist in tying up the loose ends.

Registration commenced at an early hour, the registration tent being manned by Frank 2QL with later arrivals 2AZN, 2ACD, 2EO, R. Morris and his YL. Frank of course also was handing out the QSL cards to those registering. Total registrations for the day were 283 included among which were 30 ladies and 36 children.

The Convention was officially opened by the Divisional President, Bill 2YB, who suitably welcomed members and visitors, some of whom had travelled from distant parts of the State in order to meet many of the friends they have made over the years, and many of whom they had not previously met personally.

Much interest was taken in the large disposal store conducted by the Disposal Committee under the leadership of its chairman, Keith 2ABK, and ably assisted by Barney Smyth and many others during the day's activities. This

section attracted a large crowd during most of the afternoon and the gear available was of excellent quality.

Many excellent and interesting exhibits were arranged, including a stand organised by Harold 2AAH on transistorised equipment of a varied nature. Among the gear he was showing were some fine examples of miniaturised equipment, of course using transistors, which attracted much attention and interest.

The next stand showed some very fine examples of commercial gear shown by Ron 2ALR, ably assisted by his son and ex-VR2DP. This consisted of the latest in Hallicrafters receivers and s.s.b. transmitters, and we feel was responsible for many checking over their small change and making mental notes on the desirability of the possession of these very fine pieces of equipment.

Leo 2AC took the day off from his daily duties to further the interest in s.s.b. among members. He showed a variety of his equipment and demonstrated to all the ease with which DX contacts can be made by the use of this mode. Among his helpers were Harry 2AJZ, Stan 2EL and Don 2ASW, all of whom are known as very keen s.s.b. men and who are all doing their level best to further interest in s.s.b. in this State.

The old timers' exhibit was organised by Joe 2JR, and with the moral support of Wal 2AXH provided a glimpse to the newcomer of what the gear was like in the old days.

Another display was organised by the V.h.f. and T.v. Group and was attended by many of the members of the Group during the afternoon.

The Secretary, Norm 2ALJ, was, of course, in attendance to offer assistance and advice to all and to collect any subscriptions offering.

During the afternoon, almost continuously in fact, the ladies prepared afternoon tea for all and for this very com-

mendable effort we have to thank Mrs. Duff, Mrs. Sobels, Mrs. Beard and Muriel Eagles, better known to all as 2AIA.

As the afternoon wore on, the 800 exhibit opened for the approval of all and again the dispensers of the amber fluid did a magnificent job under difficult conditions. Our helpers on this occasion were Ken 2XS, Ken 2ST and 2AGS.

Following a recess for the evening meal, the evening show commenced, and again the compere was Max 2MF. The first event was a Dutch auction for a Sunbeam steam iron, closely followed by a further Dutch auction for a transistor radio. The auctions were ably conducted by Philip 2ZBB.

The evening quiz was the next item on the programme and consisted of a technical quiz and a general knowledge quiz, the questions for which were nutted out by Harold 2AAH and Tim 2ZTM. The five contestants in each of the sections of the quiz, selected in the draw from the hat, all participated in the prize list for event, the winner of the technical quiz receiving a "Little Nipper" radio, donated by E.M.I. Ltd., and the other four participants received a Compass receiver, donated by the Disposals Committee. The winner of the general quiz received an "Astor Desk" fan, donated by Messrs. Martin de Launay Ltd.; the runners-up received a torch each.

Films followed and were enjoyed by the throng who were present for this part of the programme. For this showing we are indebted to Dave 2EO and Val 2VO.

The President closed this part of the Convention, thanking all who attended.

Sunday dawned a very hot day, the maximum temperature for the day being 106.9 degrees, with possibly a few more degrees to be added on at Dural. This did not deter the mobile boys from taking their part of the function and the bands were quite busy while they



Mobile Contestants.



Blindfold Transmitter Hunt.



were working from a radius of more than 20 miles from Dural. All gathered at Dural for lunch and a pleasant afternoon (despite the intense heat) was had by all.

Further thanks to Dave 2EO for the colossal job he did for the show and also as O.I.C. Dural; also to Tim 2ZTM and his helpers in the erection of the lighting and maintenance of the lighting plant which was running for most of the day. Our thanks also to those many who worked in the background and whose efforts contributed to the success of this Convention.

Our gratitude to the members of the Blue Mountains Section for their work in organising and running the blindfold transmitter hunt again this year, indeed a popular event for both not only the sterner sex, but also the ladies and children.

We are also indebted to the following business houses for their co-operation in donating such a fine prize list and for the technical information provided:

- E.M.I. Ltd., Little Nipper radio;
- Martin de Launay Ltd., Astor Deck fan;
- A.E.I. Ltd., Hotpoint jug;
- O. T. Lempiere Ltd., solder;
- A. G. Healing Ltd., multimeter;
- Mullard Ltd., valves, transistors and technical data;
- A.W.V. Ltd., folders of technical data;
- Lawrence & Hanson Electrics Pty. Ltd., Rola 6H loudspeaker;
- U.R.D. Ltd., two open orders for £2/10/0 each.

The co-operation of these firms is much appreciated and illustrated the esteem in which the Amateur fraternity is held.

**PRIZE LIST**

- Blindfold Tx Hunt—Gents: Graeme Jessop; Ladies: Mrs. Wheaton; Boys: Greg Mackay; Girls: Susan Adams.
- Tube Identification: 2DN.
- Brass Washers in bottle of Nuts and Bolts: 2OM.
- Series Resistors: 2DN.
- Frequency of H.F. Coil: 2A1A.
- Frequency of V.H.F. Coil: 2A1A.
- Lucky Numbers: Gents, 2AFW.
- Quiz Sheet: 2ZEX, 1st; 2OA, 2nd.
- Most Popular Mobile: 1st, 2ASV; 3rd, 2AAH.
- Morse Contest: 1st, 2EG; 2nd, 2OA; 3rd, 2DO.
- Mobile V.H.F./H.F. Contest: 2PM.
- Mobile V.H.F. Contest: 2ZCF.
- Mobile H.F. Contest: 2AAH.

**REGISTRATIONS**

The following registrations were made: VKs 2DN, 2ZDM, 2ZBD, 2ZBX, 2RI, 2ZTM, 2ZNM, 2EO, 2ZPI, 2QL, 2YB, 2ZBB, 2ACO, 2DO, 2AEY, 2ZAL, 2ZCF, 2ZEX, 2XP, 2ZJC, 2ASW, 2AKC, 2ALJ, 2HL, 2MP, 2ZCL, 2AZE, 2BK, 2KO, 2AWZ, 2AFB, 2ZAN, 2AAB, 2DP, 2ALR, 2ZGM, 2A1A, 2AAH, 2ACD, 2AZN, 2NU, 2AWW, 2AXH, 2JR, 2AQF, 2ZDF, 2AKX, 2ZL, 2AFA, 2SK, 2OQ, 2FM, 2RM, 2HZ, 2QA, 2VO, 2DW, 2AYL, 2RJ, 2ZDB, 2VC, 2XS, 2ZEW, 2AHX, 2IV, 2ACK, 2AC, 2AJZ, 2ST,

2ADL, 2AQX, 2AJA, 2EL, 2IC, 2QJ, 2ZK, 2EG, 2ZMC, 2XT, 2FP, 2HC, 2NA, 2OK, 2LS, 2OH, 2AAJ, 2YU, 2OM, 2DM, 2GW, 2BP, 2AXB, 2AVT, 2JX, 2ABK, 2NK, 2EX, 2AAW, 2GE, 2VJ, 2NV, 2ZPG, 2ARA, 2OR, 2CS, 2DY, 2IJ, 2AHR, 2VN, 2APB, 2ZKO, 2PZ, 1ZCA, 2AKB, 2PY, 2QX, 2EI, 2ACQ, 2AFW, 2FY, 2TP, 2ZDW, 2ZCC, 2HO, 2ZCW, 2AGS, 2ANG, 2ON, 2ALA, 2AVJ, 2ALF, 2ZFA, 2KM, 2ASV, 2PM, 2ZPM, 2NG, 2OA, 2ZAB, 2RN, 2ZAF, 2ZDK, 2ASZ, 2ANN, 2OM, 2BQ, 2AJQ, 2AT, 2APQ, 2VL, 2AGR, 2ART, 2ALL, 2ZBS, 2AAF, 2OY, Messrs. Claridge, Gilbertson, Allen, Fury, Hickey, Atherden, Green, Harwood, Keane, McKenzie, Warren, Champion, Harker, Nelson, Smith, Sice, Lehman, Christian, Walker, Gibbes, Osborne, Jackson, Jessup, Taylor, Cronin, Wadland, Carrey, Walker, Risbridger, Lester, Hord, Murray, Rowe, Smith, Aggett, Hand, Sumner, McLachlan, Sutherland, Burns, Gill, Barclay, Pollock, Mrs. Sobels.

★

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The Federal Treasurer again has for sale at £1. post paid, several back numbers (most in near-new condition) of this great directory of Hams. The following are available:

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# SIDEBAND

**Bud Founsett, VK2AQJ**  
22 Seiffert Crescent  
Queanbeyan, N.S.W.

## T/R SWITCH

One of the problems encountered with fast send-receive systems is the slow speed with which most antenna relays operate. Some operators also object to the loud clack-clack of the relay. To overcome these difficulties, the electronic send-receive switch has been devised. Most sideband operators are familiar with the "T/R" switch, but for some newcomers here are some important points.

It has been found that, in some cases, connecting the T/R switch in the line to the antenna or antenna coupler caused the received signals to be attenuated. This attenuation is called "suck-out," and is caused by absorption of the signal by the final tank circuit. However, connecting the T/R switch input to the final amplifier tank circuit itself overcomes this "suck-out" effect and gives added selectivity from the tuned circuit.

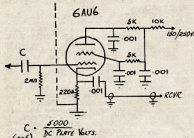


Fig. 1—T/R Switch.

Unless cut-off bias is used on the final amplifier during reception, noise is generated which will mask all but the strongest signals. This does not present any problems. May I refer you to the Sideband page of "A.R.", Oct. '60. The bias network shown there will be of interest.

Fig. 1 shows the circuit that Stan VK2EL and a number of others are using. In explanation, Stan writes: "When no r.f. is present in the final tank, the T/R switch acts as an impedance matching cathode follower, matching the final tank circuit to the receiver input. When the transmitter is on, the small grid current of the 6AU6 tube causes a negative voltage to appear across the 2 megohm resistor, cutting the tube very effectively. A tuned circuit could be used and the output link coupled to the receiver."

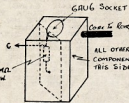


Fig. 2—Physical layout of T/R Switch.

Stan reports that the switch works very well for him on all bands. The switch at VK2EL is built in a small shielded box with the grid pin isolated from the rest of the pins by a metal shield. Fig. 2 shows how this is done. Take care to ensure that the coupling capacitor "C" has sufficient voltage rating if you connect it to the plate of the final amplifier tube. Complete isolation between the input and output of the switch is essential for correct operation.

**PERSONAL.**  
Allan VK1RX has made a come-back to sideband, this time on the 20 mc band. His transmitter is a 9 Mc. phasing design, using 6AL5

tubes as balanced modulators. A 6AU6 follows as a 9 Mc. amplifier, while a 6AK5 is used as a mixer. Sideband excitation is fed to the cathode of the 6AK5, the v.f.o. signal being injected at the grid. The v.f.o. is a 5 Mc. Command transmitter. A 12BY7 tube drives an 813 in a GEMA circuit. A 20 mx dipole and a crystal controlled converter into an AM101 complete the installation at Bexley North.

On Jan. 18, Russell VK3SX entertained several sidebanders at his home in Toorak. A most enjoyable evening was had and as you may guess, sideband entered the conversation at times. Those present were VKs 3XR, 3WR, 3KB, 3OZ, 3AHR and 2AQJ. It is very pleasant to meet your over-the-air friends face to face.

From South Australia is often heard the signal of Doug VK3KK. Doug lives at Fullarton, an Adelaide suburb, where he uses an ARSSA exciter, a 12BY7A driver and an 813 final. Three 6AC7 tubes are used in the v.f.o., one as oscillator, one isolator and one multiplier. A crystal controlled converter and a Type 19 Mark II receiver take care of reception.

From VK3NN, of Blackwood, in the Adelaide Hills, I have some news of v.h.f. s.s.b. history. Phil tells me that VK3ST worked VK2ADT on 50 Mc. s.s.b., way back in 1950. Bob VK3ST was using a h.f. tank filter (7.5 Mc.) and VK2ADT was on s.s.b. Seems as though VK3VP must relinquish the first-on-v.h.f.-s.s.b. honour to Bob. Bob and VK3QR play chess via 80 mc sideband on Friday evenings.

## 40 METRES AND U.S.B.

"K.W. Viceroy" sideband transmitters are being heard on the various bands. One proud owner being VK3LH, Tom of Lismore, in northern New South Wales. The Viceroy is an English commercial transmitter which sounds very good indeed. It employs a crystal filter and has 150 watts p.e.p. available in five bands — 80 to 10 metres. Lower sideband is available on 80 metres, whilst upper sideband is transmitted on all other bands. As 40 metre operation in Australia usually calls for lower sideband, this may be considered a shortcoming in this transmitter.

If after calling CQ on 40, you are answered by a sideband station that will not resolve, try the s.b. selector switch in the u.s.b. position. After you have established contact, change your own transmitter to u.s.b., if this is possible. There is nothing more satisfying than trying to break-in on two stations using different sidebands.

## 6U8 REPLACEMENT

If a 6U8A gives up in your gear, try replacing it with a 6CQ8 tube, much more reliable, says VK3JK.

## BC433 MODIFICATION

For you luckier people who have this excellent piece of gear, G.E. Ham News for September-October, 1960, has some interesting information on improving the performance on s.s.b. If you have access to that publication, do have a look at it. For those of you who do not see G.E. Ham News, I hope to be able to give more details very soon.

## CRYSTAL OSCILLATORS

Several of the fraternity, including one a.m. operator, have expressed their delight with the low frequency crystal oscillator shown in the December notes. Do not overlook this circuit when you are designing your new filter exciter or crystal controlled b.f.o.

## WSYIN—SILENT KEY

Sidebanders will be sorry to note the passing of Mickey Unger, WSYIN, who fought a gallant battle against cancer but died on October 11, 1960. Mickey was known to Amateurs throughout the world and was the DX Editor of the Sidebander, the S.S.B.A.R.A. journal.

# Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

## DEMISE OF ZL2HV

Editor "A.R.," Dear Sir,  
I am enclosing a card from ZL2IV and a letter from his (now) widow for your perusal. The late Les Watson was an engineer in World War I and a keen Amateur for many years. He worked all bands and made many friends in VK. He was an inspiration to newcomers to the bands. He will be sadly missed by all VKs who ever made a contact with him. Understandably, Mrs. Watson will not be able to reply to all those who have sent him letters.  
—L. W. P. Smith, VK2AWS.

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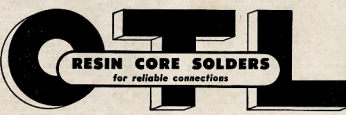
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# WHE

**David Tanner, VK3ZAT**  
C/o British Nyl, Spinners,  
Bayswater, Victoria.

Once again we have come to the end of our main DX season on V.h.f. band. For some it has been quite good, but in the main, not as good as in previous years.

First, let us look at six metres. The season started well with quite a few short openings which seemed to auger well for the future. However, things became a lot quieter later on, openings to ZL were rare, even in VK3 and VK4, and other more exotic DX was almost non-existent. The decline in openings to JA and KH6 is certainly due to the decline in the sunspot cycle, but an explanation of the lack of Es openings is still forthcoming.

Activity on 6 metres in some areas at least was less than last year, and this could possibly account for some of the shorter openings being missed. For example, north-south openings during the mornings appeared quite frequently during week-ends and holidays, which indicates that the band was probably open during week days as well. A few more beacon stations such as VK6VK would give us more information on this state of affairs.

So much for 6 m, what about 2 m? The only feature on an otherwise uninteresting landscape was the 6 to 2 m contact between VK5 and VK6. Contact has been made on 2 m since over this path before and could probably be done regularly if skeds were made. Here in VK3, two metres seems to be but a shade of its former self mainly due to the fact that our former active exponents of larger arrays and better gear have left for greener pastures. Around the city at least, one of the shortcomings of an average 2 m station is the antenna, although the construction of a reasonable one, a twelve foot Yagi at least, should rectify the means of an antenna. Remember, a large beam, well situated, helps to increase both the transmitted and received signals.

On the 1 m front, new records have been made, once again using stabilised equipment and adequately sized antennae. Work on 1296 Mc. in W. land has also indicated just what can be done with big 'x's, large antennae, narrow band rx's and also the use of c.w. or s.a.b. and these same techniques can be equally applied here. So how about it? Let's see what new horizons we can open up in the future.—ZAT.

## VICTORIA

After an enforced absence due to shifting QTH and then a run of VK trouble, which is still not completely cured, I am back in harness again. Thanks to David 3GV for carrying on in my absence. Unfortunately my comments are rather brief regarding 50 Mc. as I have only heard rather incomplete openings on this band. Thanks to Maurice Cox and Mac Hillard for their information.

For January, 6 m activity was pretty fair for the number of openings but not for the quality. Let saw 5.5, 5.5 and heard VK3 3rd, 4th, weak JA, then VK4 and 6, 4th and 5th brought VK4. 6th, VK4 and weak ZL 7th, VK4 and 8th, ZL heard and weak VK4. 8th and 9th, VK4 was worked here in Melbourne by a lucky few. For the rest of the month, VK4 and VK3 were in and out on quite a few occasions.

144 Mc. Activity died quite a bit after the Contest concluded on 15th Jan. and in particular Bill 3ARZ was conspicuous by his absence. However, after making over 80 contacts on 144 m only, I don't suppose we can begrudge him a rest from Amateur Radio. Incidentally, it wouldn't surprise me if Bill won the Contest with his effort.

On the DX front, nothing unusual until 23rd when David 5AW had a really good signal into Melbourne. David worked quite a few amongst whom were 3AFV 3ALX, 3ZHV 3GV, 3ZGV and 3ZCG. Al 5ZCR was also on deck and stations he worked included 3ZCG and 3ZJV. T.L. came through on 27th and worked 3ZED and 3ZAZ. John heard Col on the following evening but couldn't raise him.

New calls noticed lately include 3EA, 3ARF, 3ZGL (ex-3ZAL), 3ZJL, 3AZT and his XYL, 3ZJT, 3ZLN, 3AAD and 3ZHK at Dandenong.

Frequencies of interest are: 5GJ, 144.55; 5CH, 144.48; 5ZCR, 144.06; 5AW, 144.84; 3NN, 144.49. 381 Mc.: George 3ZCG is on the band every Wednesday night at 2000 hrs. looking for Melbourne contacts. 3AUX and 3AAK (280.00 Mc.) hope to keep the Melbourne end going. Jack 3CS is back on this band looking for worked 3ZER on the 14th. 3ZCG has been working 3ZER/3 with 5 and 8 signals both ways. George cracked the jackpot on the 23rd when he worked 5AW with 5 and 8 signals and got 5 and 6 from David. The distance involved here is about 250 miles and betters 3ZER/3-5AW by about 100 miles.

Late News.—Watch for VK3ZGQ at Broken Hill on 51 Mc. He has been heard and worked from Melbourne.

The Ballarat (144) Moonbounce Project is proceeding well and the antenna installation is very nearly complete.

Jack 3CS will soon be active on 288 Mc. using a 24 ft. long Yagi lent by 3ZAT. Peter 3ZDO is also on 288.16 transmitting only at the moment. 3ZAT has passed the Morse and hopes to obtain 5LO in place of 3ZAT.—3ZGP.

## 50-54 Mc. BAND

At the request of the Institute, the P.M.G. Department has further extended the use of this band by Australian Amateurs until 31st December, 1961.

This approval has been granted on the understanding that if the band or portion thereof is required for television prior to 31st December, 1961, the Institute will arrange for it to be vacated by Amateur Stations within fourteen days of receipt of written request to do so.

## TASMANIA

The next meeting of the Tasmanian V.h.f. Group will be on March 15. The January meeting included a talk by Barney TZAK on finding hidden 2 m tx's. W.I.A. re-broadcasts continue on 54.8 Mc. and 144.28 Mc. and up taken by Alan 7MY. Alan lost his modulation transformer while on this job recently but should be back to normal by now.

50 Mc. DX wise, the band was too quiet during January. Many locals were away during this time: TZAO and TZAQ in VK5 and TZAI and TZAX also being absent. Thus conditions may not have been made the most of.

On 29th Dec., TZAC was up early, 0745 hrs. to work VK5. Later in the day VK4 arrived. The new year opened up in the right manner with an excellent opening to all States. TZAI worked 6ZDS, 7MY also worked VK5. Other 6 heard but Interstate QRM seemed a bit too thick. VK4 were worked on band scatter as they worked ZL. Western VK3 VK2 and VK1 also worked at excellent strength. On 4th, VK4 worked by TZAC. Seemed to be little activity during the Contest period. VK3XK was heard by TZAI and TZAJ (date uncertain), but couldn't make themselves heard.

Jan. 14 brought VK4 again, followed by a good all-day opening to VK4 and VK5 on the 17th. TZAQ and TZAO being active during the day and joined by others later on. VK2 seems to provide the strongest signal and date. Hugo 2WH on this occasion, being as strong at this QTH as a 150w. local 1 mile away. A report in the local press told of the reception of AET Channel 1 in All Springs (on a communications rx), on the 16th and 17th Jan. However, no sign of the VK3 prefix was heard at this QTH on 17th. VK2 again on the 21st. JAs were heard by TZAI on 22nd at 1030 hrs. but none worked. Darrell 2ZLP popped up consistently at lunch time, as on 24th Jan. VK5 worked on 25th by TZAQ brought the month to a close.

Local activity is looking up well, TZAS and TZAK both now well established. Michael Jenner, at New Norfolk, is due on 6 m, receiving his call sign. Michael guarantees David 7AB has the strongest signal on any band, ever so far. He has been heard to have 7AB from this locale. Ted TZAV is another we'd like to come down to 6 m.

Phillip TZAX, in between hawking soap powder, is on a major re-building programme—has spent some time connecting black iron

chassis and panels. News from the north tells of the return of TRL at Stanley to 8 m, he hopes to be able to repair a damaged 4 el. Yagi soon, hope it reaches down south sometime Reg. I believe skeds will have been arranged between 3ZJE and TZLZ on 50 Mc.—results unknown down here at the moment.

144 Mc. Two metres is missing out badly right now, but should have some comers later on in the year. We'll have to make an effort to bridge the gap between Hobart home stations to Launceston and the North West Coast both on 2 and 6 m. It may be a matter of hitting the right rocks on some of those 5,000 feet mountains. David TZAI will be operating portable on King Island during late February and possibly early March, looking for VK3 and VK7 contacts.

288 and 596 Mc.: One metre activity still hinges on mod. ocs. TZAI running a 100w. one using a QEQ06/40. TZAQ has a crystal controlled mobile in operation.

576 Mc. is at last kicking off. TZAI has gear going as have TZAO and TZAQ. Also interested are TZAK, TZAJ and TZAS.

Noticed TZAI and TZAS snooping around likely places in search of gear for 2,000 Mc. When, 127-TZAO.

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# S.W.L.

**Maurice Cox, WIA-L3055**  
Flat 1, 37 Boyd Crescent,  
Olympic Village, Heidelberg,  
N.33, Victoria.

We, the office-bearers of the VK3 Group, are very disappointed in the poor attendance figures at the Group meetings. These meetings, in case you don't know, are held on the last Friday of each month at the rooms, 478 Victoria Parade, at 8 p.m.

I myself, have noticed that new members come along for one or two meetings and then we don't see them again. Why? I would like to know. After all, the Group is for you and your hobby, why not practice it, tell me why you don't come any more; write me a letter, tell me what your gripes are; better still, come to the meetings and tell me.

You know, chaps, I have a feeling that it is, dry meetings, too much talk and not enough action; nothing for you to do but just sit and listen to a lot of things that don't interest you, is that it?

So it's up to you boys to tell me and we will do something about it. Soon, I hope, with approval we will be able to have our own receiving station at the rooms. So keep your fingers crossed.

Quite a few visits have been arranged for the next few months so keep your eyes and ears open for further details.

probably enter the N.F.D. Contest (best of luck, Garry).

Colin will be on leave, but his brother Trevor is entering a log. Dale L5023 is having bug trouble with his No. 11. Colin has logged a new country—XWAL. He tells me he has a 522 rx on the way from Melbourne for use on 2 mx. Colin received a letter from Bob Simmonds, of Iron Knob, and Bob has put up the WWOV all-band antenna and he says it has very much improved reception on his 1155 rx. Colin would like circuits for 10, 15 and 6 mx converts—who can help? Thanks for the news, Colin.

## TASMANIA

Michael writes with a query and wants to know what to do with members who live a long way from meetings? Michael, write to them with news of your activities down there. Keep in touch with each other; take note, you VKT S.W.L. write your Secretary with your activities, he can write them in a letter to me for inclusion in the S.W.L. Notes.

Next month I'll give a list of VKT S.W.L.s, and their gear and give them each month after that for other States, so you S.W.L.s can write me and tell me what gear you use, plus the antenna.

## CORRESPONDENCE

I have received correspondence from the following: Don Grantley, L3088; Eric Trebilcock, BE8R-195, L3042; Howard Harvey, L5034; Harry Major; Gram Rutter, L3091; Chris Abernethy, L2211; Peter Horn, ZL337, soon to be a VK3 member.

John Walker, VK2, what a mail! Some of these guys write twice a month—I like it! Once again I repeat, anybody can write to me about their activities, the gear they use, plus antenna, don't be frightened. Don't forget your QSL ladder scores, send them no matter how big or small.

Howard Harvey, L5034, of 27 Wainhouse St, Torrensville, Adelaide, has quite an antenna farm.

At the top is a 5 x 5 beam for 288 Mc., then a 7 element beam for 144 Mc. Just visible at the bottom of the photo is a 1 metre ground-plane. A 2 element beam for 6 metres was added below the 2 mx beam after the photo was taken.

20 metre two element beam (director app. 30 ft., spaced 0.1 wavelength apart, height of dipole of 33 ft.). A 40 metre dipole is shown above the beam, but this has now been replaced with a new dipole coming from the point where the upper guys are attached to mast.

Eric says he has a plan. He's got to keep looking ahead two weeks or so. Do you know what, he only listens one hour per day and believe it or not, goes QRT when the DX is at its highest. What a plan, I do not know how you do it Eric.

I met him the other night, he had just collected 60 QSLs for his DX trip. He tells me he had a good Xmas, did a lot of travelling, had his mother over from VK5—81 years old and completed her 30th birthday. How about that, good for her. Eric's Federal QSL job is nearly finished. Ray is back now. Last month was Eric's busiest, 4,000 cards (none for me).

In 1960 he mailed 1,575 reports, received 916 QSLs from 125 countries and 37 zones; heard 179 countries in 40 zones; 49 ships, 9 motor cars. Up till 15/1/61, he had mailed 34 reports and has 14 QSLs from 9 countries and 9 zones. His all-time scores: 279 countries, 10 ships, 10 cars with QSLs from 229 countries, plus 40 zones. Thanks Eric for that information, very good.

My mate, Donald Grantley, is next. He did not do very well at Albany on 6 mx in the R.H. Contest. He got into the Xmas break though just as it finished. Obtained about 50 points and heard 15 K5, 10 ships, 10 cars. JA (more than we heard, Don). He's put a co-ax. input on the AR7 in lieu of plugs, restored the 6AS mixer circuit to the original 6AS. This improves the stability of the osc. and then he peaked the coil boxes again on the phone DX section. Other than 10 mx, which hit the co-ax. input, this is the 1st. of the converters. He obtained two 40 ft. oregon 4 x 4 inch masts and is going to erect an end-

fed Zepp, 66 ft. long at about 45 ft. He's given me the gen on a vee beam, 33 ft. long each each, 90 degree angle (no less) and fed with open wire feed line.

On awards, Don says a s.w.l. version of the station W.L.A. hundreds on p. 13 of Jan. "AR." would be the "ant's pants." I'll look into it. Don. Latest from Don is that his AR7 is under the bench and he is now using a Marconi R155—more from him next month.

Howard Harvey, L5034, of Torrensville, writes me that he is nearly 71. His rig is a dual wave rx with additions and modifications for tuning 40, 20, 15 and has converters for 6 and 1 mx. His antennae are: 40 mx half wave centre feed dipole, 30 ft. high; 20 mx two element beam, 30 ft. high; 15 and 10 mx double dipoles, 25 ft. high; 6 mx two element beam, 21 ft. high; 2 mx 7 element Yagi, 23 ft. high; and 1 mx 5 x 5 (vertical) polarised, 27 ft. high. What an antenna farm, and his photos on this page prove it. He has yet to build rx's for 2 and 3 mx, but he's still at school. Also he will be getting a new rx soon—160 to 10 mx. He has not been active much, only logged 53 QSOs, but has QSLs by report to 20 countries. More from Howard next month.

Harry Major is an old hand; his early s.w.l. was done on a 1 valve adaptor plugged into an ordinary radio set. It was rather hot and enclosed in a metal case with a good earth.

so as not to cause any interference. With two audio stages, it brought in dozens of overseas stations and hundreds of local Amateurs (not like now, Harry).

At the moment, he has a six valve, also spends a lot of time playing around with a valve super regen. originally designed for 144 Mc. and he's been trying out coils for the lower frequencies, but he's not having very much success. He wonders if the Editor of "AR." could arrange some articles on simple s.w. sets for young beginners. It would help the younger lads to get started.

Graham Rutter, L3091, is in a one-horse town called Peethings, with the C.S.I.R.O. Division of Meteorological Physics. His only link with the outside world is a transceiver which often won't load when one wants to use it. Birds feed the antenna a good resting place and by the time he's ready to use it each day, he doesn't have a sky-hook, his equipment is a BCS1F and 122. The is often on the coast guard and lighthouse frequencies having QSO with the Met. Station on Neptune Island. He wishes he had a rx, the locale is good, no noise and high up. Hunting is the best and he's going broke buying bullets to feed the rabbits with; there's so many of them. Save the money, Graham, and buy a rx'con.

Judging by what I have written here, I think I've used all my space. So I'll have to finish up now and write about Peter Horne and Chas Abernethy next month.

There is no attention to the QSL ladder, so will not include it. Till next month, this is your scribe going QRT, best of DX, 73, Maurice.

## VICTORIA

We still plug along creating new members. There have now been issued 101 listener numbers. Incidentally, if any VK3 S.W.L. would like some QSL cards, just write to me and I'll forward some to you. These cards were printed by the Victorian Government Tourist Bureau. They are a very nice coloured card, a beautiful scene of Melbourne and the details for use on the back. There were a few errors made in the printing process, but they are easily overcome. I have sent out 10 already, the most I have emitted in 18 months.

Bert Stebbings spent his holidays at Deniliquin. Bert said it was very hot, no fishing, so spent eight hours a day listening on 6 mx, then found out converter on the blink. Sorry to hear that Bert. We hope you have better luck on your next DX-pedition.

## SOUTH AUSTRALIA

The Group has been very inactive, but on Jan. 18 a meeting was held to bring the Group into full swing again. Garry L5028 is at present constructing a 7 valve rx and will most



## FEDERAL

**Fed. President:** G. M. Hull, VK3ZS.  
**Fed. Asst. Secy:** W. Mitchell, VK3UM,  
 Box 2111W, G.P.O., Melbourne, C.I. Vic.  
**Federal Councillors:**  
 New South Wales—Perc Healy, VK2APQ.  
 Victoria—Alan Elliott, VK3AEI.  
 Queensland—Bert Harker, VK4AO.  
 South Australia—H. J. Duncan, VK5AX.  
 Western Australia—Rug Hugo, VK6KW.  
 Tasmania—E. J. Cruise, VK7EA.  
 Papua-New Guinea—Russ Coleston, VK9KK.  
**Fed. Contest Committee:** Lon Jensen, VK7LJ,  
 Chairman, Box 851J, G.P.O., Hobart, Tas.  
**QSL Bureau:** R. E. Jones, VK3RJ, 23 Landale  
 Street, Box Hill, E.I. Vic.  
**Awards Manager:** Alf Klesiek, VK3KB, 1 Mac-  
 Farland Street, Brunswick, N.10, Vic.

## NEW SOUTH WALES

**President:** W. J. Lewis, VK2YB.  
**Secretary:** Norm Beard, VK3ALY, Address mail  
 to Rooms at 14 Aitchison St. Crows Nest,  
 N.S.W.  
**Meeting Night:** Fourth Friday of each month at  
 Science House, Gloucester Street, Sydney.  
**Divisional Sub-Editor:** Ted Whiting, VK2ACD,  
 16 Loudon Street, Five Docks.  
**QSL Bureau:** Aitchison St., Crows Nest.  
**Frank Hine, VK2OL, Manager:** assisted by  
 Allan Smith, VK2AIR.  
**Zone Correspondents:** North Coast and Table-  
 lands: Noel Hansen, VK2AR, Ryvan Ave.,  
 West Kempsey; Hunter Branch: R. W. Rose,  
 VK2AGR, 17 Brooks St., West Wallasey;  
 Newcastle and Lakes: H. Hawkins, VK2-  
 WYL, 9 Comfort Road, Newcastle; Western: W.  
 Stitt, VK2WH, "Cambijova," Forbes; South  
 Coast & Southern: E. Fisher, VK2IDY, 2 Oxide  
 St., Warrawong; Sth. Western: J. W. S. Edge,  
 VK2AJJO, Wallace St., Coolamon.

## FEDERAL

50-64 Mc. BAND

At the request of the Institute, the P.M.G.  
 Department has further extended the use of  
 this band by Australian Amateurs until 31st  
 December, 1961.  
 By the time these notes are read, the under-  
 standing that if the band or portion thereof is  
 required for television prior to 31st December,  
 1961, the Institute will arrange for it to be  
 vacated by the amateur service. The following  
 days of receipt of written request to do so.

## FEDERAL QSL BUREAU

Belatedly, perhaps, this Bureau reciprocates  
 Season's Greetings received from the "DL,"  
 "OK."  
**New address for the Cuban QSL Bureau is:**  
 Apartado Postal Num. 6966, Habana, Cuba.  
 By the time these notes are read, the c.w.  
 section of the 1961 R.E.F. (French) DX Contest  
 will have been held. However, the phone  
 section will be held from 1400 G.M.T., 15th  
 April, to 2200 G.M.T., 18th April. Code is R/S  
 plus three-figure number of contact. Score 1  
 point for each French station contacted (France  
 or Colonies). Multiplier is each French sta-  
 tion or each overseas country. Total score is  
 points multiplied by multiplier. Scores to be  
 forwarded to R.E.F. B-P, 42-01, Paris, R.F.,  
 France (closing date not stated).

So successful was the Boy Scouts' Jamboree  
 on the Air, 1960, that already the week-end  
 of 21st and 22nd October has been set aside  
 for the 1961 event. Full details at a later date.  
 The Executive Commissioner of the Boy Scouts  
 International Bureau, Ottawa, Canada (VE-  
 3JAM), desires to thank all those Hams who  
 assisted in the 1960 event.

The QSL Manager of the Okinawa Amateur  
 Radio Club has sent details of the Club Award  
 given for contacts with K16 stations. In claim-  
 ing the number of contacts required is deter-  
 mined by the Zone in which the claimant  
 is located. Further details from the Federal  
 QSL Manager, W.A.

As this is probably the last time I will be  
 writing notes for this column (Ray VK3RJ is  
 due back home early February), I desire to  
 thank those readers who have commented favor-  
 ably on my efforts.

73 Eric Trebilcock (BERS-195), Acting Fed-  
 eral QSL Manager.

## NEW SOUTH WALES

The month of January is the most important  
 one in the year of the N.S.W. Division of the  
 Wireless Institute owing to the fact that the

# NOTES

## VICTORIA

**President:** D. A. Wardlaw, VK3ADW.  
**Secretary:** M. J. Owen, VK3EZO.  
**Administrative Secretary:** Mrs. Bellare, 478  
 Victoria Parade, East Melbourne, C.2. Postal  
 address: P.O. Box 36, East Melbourne, C.2.  
**Meeting Night:** First Wednesday of each month  
 at the Radio School, Royal Melbourne Tech-  
 nical College.  
**Divisional Sub-Editor:** P. D. Williams, VK3IZ.  
**QSL Bureau:** Inwards and Outwards—W.L.A.,  
 Vic. Div., P.O. Box 36, East Melbourne, C.2.  
**Zone Correspondents:** Western: W. J. Kinsella,  
 VK3AKW, Magdalla, Lubeck; South Western:  
 D. G. Hauch, VK3AKN, "Toorunga," Broad-  
 water, via Port Fairy; Far North Western:  
 M. Folie, VK3GZ, 101 Lemon Ave., Mildura;  
 Midland: R. Jonasson, VK3ND, Farnsworth  
 St., Castlemaine; North Eastern: T. K. Ten-  
 nant, Park St., Tatura; Eastern: J. F. Ryan,  
 VK3ZBR, and F. D. Voight, VK3ZGV.

## QUEENSLAND

**President:** W. J. Rafter, VK4PR.  
**Secretary:** S. J. Armstrong, VK4SA, Box 638J,  
 G.P.O., Brisbane.  
**Meeting Night:** Fourth Friday in each month at  
 the State Service Union Rooms, Elizabeth  
 Street, Brisbane.  
**Divisional Sub-Editor:** W. J. Rafter, VK4PR,  
 Willandra St., Alderley, Brisbane.

**QSL Bureau:** Jack Files, VK4JF, Vanda St.,  
 Buranda.

**Zone Correspondents:** Maryborough: R. J.  
 Glascock, VK4BG, 80 North St., Maryborough;  
 Townsville: R. K. Wilson, VK4RW, Hogan  
 St., Stuart, Townsville.

## SOUTH AUSTRALIA

**President:** L. F. Brice, VK5OK.  
**Secretary:** J. C. Haseldine, VK5JC, Box 1234K,  
 G.P.O., Adelaide, Telephone 3185.  
**Meeting Night:** Second Tuesday of each month  
 at St. Paul's Church Meeting Rooms, Cn.  
 Flinders and Pulteney Streets.  
**Divisional Sub-Editor:** W. W. Parsons, VK5PJ,  
 10 Victoria Ave., Rose Park, S.A.  
**QSL Bureau:** G. Luxton, VK5RX, 27 Belair Rd.,  
 West Mitcham, S.A. (Inwards & Outwards).

## WESTERN AUSTRALIA

**President:** Cole Songster, VK6CS.  
**Secretary:** L. S. Eddington, VK6LS, Box N1002,  
 G.P.O., Perth, W.A.  
**Meeting Night:** Third Tuesday of month at  
 Mends Street Hall, South Perth.  
**Divisional Sub-Editor:** P. Haywood, VK6PH, 2  
 Barnsley St., Queens Park, W.A.  
**QSL Bureau:** Jim Rumble, VK6RU, Box F319,  
 G.P.O., Perth, W.A. (Inwards and Outwards).

## TASMANIA

**President:** T. Allen, VK7IAI.  
**Secretary:** K. E. Millin, VK7KA, Box 851J,  
 G.P.O., Hobart.  
**Meeting Night:** First Wednesday of each month  
 at Royal Cornwall, 157 Liverpool St., Hobart.  
**Divisional Sub-Editor:** I. Nichols, VK7ZZ, 9  
 Cressy St., New Town.  
**QSL Bureau:** Peter Brown, VK7BR, 39 Willow-  
 dene Ave., Lower Sandy Bay, Hobart.  
**Zone Correspondent:** North Western Zone—  
 Terry Tonga, VK7TT, Northern Zone—Ray  
 Walden.

Annual Convention is held at Dural on the  
 Saturday of the Australia Day week-end.

This year the Eleventh Annual Convention  
 was opened by the monthly meeting at Science  
 House, Gloucester Street, where there was an  
 attendance much lower than would be ex-  
 pected. Some, no doubt, are still fortunate to  
 be on leave, others working, while yet a  
 further proportion of our members would like  
 to have found the attraction of the t.v. screen  
 too much for them with the effect that they  
 no longer seen at meetings as regularly as  
 in days of yore.

Those who did attend, however, heard an  
 interesting lecture on Frequency Shift Keying,  
 ably given by John Crocker of the Depart-  
 ment of Civil Aviation. This is yet another  
 of those interesting addresses which have  
 been arranged by Harold ZAAH, and in his  
 lecture, John gave us an insight into this type  
 of transmission which is being widely used  
 by his Department in their communications

network. John roused considerable interest in  
 his subject and was quizzed following the  
 lecture on some of the finer points of the system.  
 The vote of thanks which followed was moved  
 by Roy ZIV and was passed in the usual  
 manner.

Discussion followed, mainly initiated by Barry  
 ZAAH, on the prospects of this mode being per-  
 mitted on the frequency in the future. This  
 matter is being pursued and more will be  
 heard on the subject at a later date.

Following the lecture there was little  
 discussion on the usual matters which is nor-  
 mally conducted on the footpath, no doubt most  
 of them wishing to make an early start on  
 the big day following.

It is well to remind members and others  
 interested, that on the second Friday of the  
 month there is the mid-monthly meeting which  
 is held at 15 Aitchison St., Crows Nest, for  
 which meeting some interesting lectures and  
 displays are being arranged. Details of this  
 meeting are always to be heard in the weekly  
 broadcast from VK2WI. So fellows, make it a  
 night each month, every month.—ZACD.

## HUNTER BRANCH

This being the month to change or not to  
 change your local officers, how about you pre-  
 senting yourself for duty. I doubt if anyone  
 will object to stepping down in your favour and  
 as Lord Byron said, "Give it a go—you never  
 know." The meeting night is 10th March at the  
 University of N.S.W., Tighe Hill, at 2000 hrs.  
 As an added incentive, it is pretty well known  
 that Harold ZAAH will be there to talk about an-  
 tennae and those who heard his previous tran-  
 script story will need no coaxing along. If  
 Divisional President is coming, and we hope  
 he is, maybe he had better walk.

The "Dural Do" for 1961 is now behind us—  
 I broke all records to be there in time to hear  
 a particular lecture, but found that the chaplain  
 had taken unbride and decamped. A pity  
 these things happen, but apparently you can  
 make a trip to Dural but you can't keep him  
 from dispersals.

Noticed walking around the grounds were  
 VKs 2CS, 2ZL, 2AKX, 2AFA, 2RJ, 2AYL, 2ZDF,  
 2ZL, 2FP, 2XT, 2AKE, plus Messrs. Sutherland  
 and MacLoughlin. When I arrived I found  
 that they must have heard me coming as the  
 gates were locked but was able to persuade a  
 gentleman in a gown and wig to squeeze my  
 car in a corner. I must say the grounds pre-  
 sented a vast improvement to last year and I  
 was close by to the goings-on. Last time I was  
 parked so far away that when I went out to  
 get my tea, I arrived back in time to go home.

Harking back to the aforesaid gent in wig,  
 etc., I was astonished to see that it was F.C.P.,  
 and that he stands third in line. I must pre-  
 pare APQ who had only been appointed to



"That's funny, the ignition hash has stopped  
 all of a sudden."

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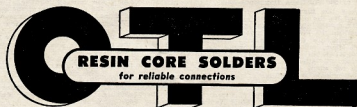
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Me.	E. AUSTRALIA — W. EUROPE S.R.												Me.
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that exalted position the night before. If Pierce does as good a job in that capacity as he did when he was Divisional President, all will be well, so look out F.E.—P.C.P. is on the job. One for your note book Pierce, and Percy Parsons please copy: Tell SWI to keep off 4WI during their broadcast on Sunday mornings.

I believe ZLZ's ground network is missing up 3CZ pipeline at Killibeen Bay. Varley 25P's daughter was married early in the year and Tony Mullins has arrived back from his honeymoon. Wonder how the copy is viewed by one Eric 6VM, whilst stationary mobile on New Lambton Heights. His shepherding out of Newcastle is over by Romeo and Juliet, and the last I heard Eric was at Belmont.

Note with interest that it is 25 years since "The Old Man" passed away, but Hiram and his offiders—Wuff-Hong and Rettsmith—are remembered.

Was very sorry to hear that the Melbourne Monitor, Roy Parker, passed away. I have been in communication with him ever since I came on the air in VK3 land and being a very sick man he obtained quite a lot of enjoyment by listening to the Amateurs.

The two Goons, Z2L and Z4QR, recently chatted to me 3000 ft. and about what a lot of words have been wasted between the two. Secretary Gordon, so a bird tells me, is at last going to do a bit of study and trying for his ticket. However, I am sure from the Goon Show—we must draw a line somewhere. Looks like the Man in Melbourne has run out of call signs as Stuart Z2DP is still waiting for a full call—there couldn't have been any sunshine in Melbourne as he came back from there without his usual tan. Of course anything can happen in VK3, so maybe they just skinned him.

Well chaps it is getting dark and I cannot afford to light the candle, so don't forget the Annual Meeting on the 22nd. No doubt Bill Hall's social will be at his place on 22nd. So, as there may be a new correspondent for the next issue, all I can say is thanks for reading—AQR.

VICTORIA

Last month there was no news. This month there is little. Two reasons are apparent for this; first, your scribe has been on vacation, second, the Amateurs are busy.

Please, please let me have some news and views for the broadcast and the notes—VK-

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. Cnt.	Call	Cer. Cnt.
2 VK8RU	43 243	23 VK6KW	12 182
7 VK6MK	43 243	24 VK4HR	3 176
15 VK5AB	29 264	25 VK3CB	20 171
16 VK3JW	14 211	26 VK4RW	23 164
23 VK3ATN	26 204	27 VK3EE	10 163

Amendment:

VK3TG + 48 112

C.W.

Call	Cer. Cnt.	Call	Cer. Cnt.
1 VK3KR	10 286	24 VK4HR	8 218
2 VK3CX	26 273	25 VK3XU	48 213
3 VK4JT	29 264	26 VK3CB	17 212
4 VK3JH	19 236	27 VK6RU	18 210
5 VK3PH	16 226	28 VK3RV	38 203
6 VK3BE	6 122	29 VK3X	23 198

New Member:

VK3AX + 68 119

OPEN

Cer. Cnt.	Call	Cer. Cnt.	Call
1 VK2ACK	6 282	23 VK3BE	4 231
2 VK4FJ	32 267	24 VK3HG	3 225
3 VK6RU	8 245	25 VK3WL	48 225
4 VK3XU	24 223	26 VK3J	23 221
5 VK3NC	77 233	27 VK3XU	61 221
6 VK4HR	7 233	28 VK6KW	13 216

SAKI, John Battrick, 9 Bayview Rd., Frankston. Phone 33478.

**Elwood Life Saving Club:** Due to an appeal made over VK3U one Sunday, three of our members, Norm 3OM, Bill 3ARZ and Ian 3ZBI have done good service by assisting the club with instructions and equipment on their new patrol launch and base station.

**Disposals:** It is planned to enlarge the disposals committee for 1961 and to greatly widen the scope of its activities. A great deal of work has been done by the previous committees—Russell Bradshaw and Gordon Dennis—who have worked under great difficulty to obtain what equipment they could. We think that 1961 will see more activity in this direction with some more people to share the work, and a possibility of new avenues open for disposal.

**February Monthly Meeting:**—How many were there at the meeting? A couple of dozen people! What were the agenda items like? Excellent! Why so few people? Why?

Portable/mobile transistor power supplies; a 6 metre s.s.b. filler type mobile rig; and a 7 Mc. mobile set-up were shown and discussed by VKs 3ZQ, 3ZAT and 3YS. The lectures were full of technical material and were very well presented with the actual equipment on display.

**Contests:**—Thanks to those who were out on the National Field Day. Don't forget, the 1961 R.D. Contest is less than six months away!

**Amateur Advisory Committee:**—Council has re-elected the following to the R.D. Committee for 1961, viz.: 3ZQ, 3OF and 3WY.

**VK3WL:**—The station at the rooms is working satisfactorily now, but there's still a lot to be done yet. What about it, chaps? V.h.f. gear now!

WESTERN ZONE

As these notes are penned, Bill 3AKW is enjoying the cooler climes of N.Z.T. whilst we southerners are sweating out the summer. I will take him to Sydney via Alice Springs, Darwin and Brisbane. Surely there's a shorter route to the States?

Bert 3EF found quite a few dry joints and leaky capacitors in his modulator the other night and now has one of the cleanest rigs in the zone. He then did a 1000 ft. test. This time it is 1 mx DX. Yes sir! and into VK5 too. Herb, ably assisted by Garry and Dax, worked DXA and SAW. But both ends over a distance of 90 miles and running 16 watts. F.B. Herb, you've got me interested.

Merv. 3AFO has just finished modifying and aligning his ART rx with pleasing results. The local noise has been made a little less, but now it's 59 plus (damn it). Has also strung up two new antennae on 40 and 20 mx. Gosh, the birds haven't a chance now, have they?

Gordon 3GW and Barry are busily engaged in knocking up an inductance bridge—no choke! Keith 3ATS is planning a table-top tx conforming to modern standards. Vic 3AEG, who hails from Murrumbidgee, will be on before this goes to press most likely, with a completely re-built rig. Wilson 3AFU, a newcomer to Amateur Radio, will be on the bench, sham, will be on the lower bands with an AT5 just as soon as work and rural fire brigade radio network commitments permit—3AFO.

SOUTH WESTERN ZONE

Our congratulations go to Brian 3XN and XYL Helen on the arrival of another harmonic, the third one, and Yvonne, who tells us that this is the first of a series of similar notices. No, no, Helen, we mean that the old bird may be visiting other places in the zone, so. Brian has taken a little time out to get the mobile rig really on the nose, sorry babe.

John 3AMC has been heard using the new modulator on 80 mx lately. Eric 3XL, who surely must have the hottest rig in the zone, judging by what he hears, offers the news that 3KO will be spending some leisure hours in the zone with his AY4BB.

Tom 3WB is planning for another mobile, centred around the 108 set. The tx side will use a 5763 xtal osc. driving a 2E26 final from 80 mx to 20 mx. The antenna will be on a 30 ft. coupling. A carbon mike will be transformer coupled to the 2E26 Heising modulator. The rx section will be substantially unaltered except for the tuning up the audio section. Alas, no mention is made of a key!

Although the local bands have been rather quiet lately, DX is still making a good deal of listening on 20 mx has revealed that Jack 3JA and Norm 3NC are still getting amongst em. Very short skip did bring in quite a few VKs on several occasions, but no zone stations were heard.

The resumption of the Sunday broadcasts from SWZ continues to be a most welcome and mighty signal from the new tx and we are

looking forward to the christening of the 80 mx section.

Our club members, the associates, are none the less making their presence felt in various ways. Up Western way changes in the organisation of the network have taken some of the load off Hugh O'Rourke's shoulders and the job is going along nicely with quite a few new members this season. Secretary of the group is now Kenneth, of whom many very big VKs we have mentioned before. A note has come to light mentioning two s.w.f.s. from over Casterton way—Jack Murphy and Fred Bousfield. Unfortunately that's all it tells, so can anyone help further?

The National Field Day Contest has passed into history now. At least one zone station has been heard on a mobile, very big VK3X. Mc. and poorly, we are told, on 3.5 Mc. He was Brian 3XN who camped by the Hopkins River. The 3AKN mobile blew up after one QSO and we retired to the home station instead; much more comfortable there. The 80 mx band was very good all day on Sunday and very few stations used it. We did and worked 3ADW/P, manned on this band by Keith 3YQ.

The W.I.C.E.N. practices have continued to be poorly attended. The time and date for those who keep getting out of touch is 2030 hours on the second Thursday and last Sunday of each month on or close to 3550 kc. Special space have been arranged on every declared fire day and days of extreme danger which so often precede a declared day in this western side of the State. The initial sked is at 0715 hrs on 3550 kc. and depending on our appreciation, other skeds will be arranged during the day. All country operators are asked to monitor this frequently. All DAY if possible as this at present is the only means we have of putting all smoke nets into instant contact with each other. Valuable tips on the weather can be picked up on the Amateur bands, particularly on 40 mx during such weather. Anything which supplements the fire nets' own service on 3550 kc. is appreciated. We are in the middle of VK5 land. So appeal is made to any VKs who hear a zone member about to give him a moment or two. Thanks are also due to the SA, especially to the W.I.C.E.N. SVII, 5DJ/P, 5AQ/P and others for their help and co-operation in the past month.

QUEENSLAND TOWNSVILLE

For so early in the year, the bands have been very busy. Very little time coming through on any of them. Noise is very predominant, wonder where it all originates? Heard two G boys discussing the fact that the local television has been causing a lot of noise on 21 Mc. band. Anybody not experiencing noise come to my QTH and really hear it at its worst.

Quite a roll up at the annual general meeting of the club the other week; quite a number of the old faces missing. One chap was heard to remark, "They stayed away as the

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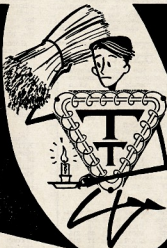
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hope that the news will be good news. The Elizabeth club station, 5LZ, will be operating in the P.O. Box 46, 6 m. station will be working as well, so the gang will be looking to the city for some 6 m portable/mobile contacts. Naturally as you read this, you're stale news, but I have no conscience where space for VK5 is concerned!

Probably it is my grey hair, or perhaps it is my age, my mind will give me a deceiving air of wisdom, but it is remarkable how often I have been asked if there is any cure for XYLs who will persist in chattering, reading the news out of the paper, or wanting to discuss what happened to the change from the grocery bill last week. Just when I am about to give up, I will admit to there being many such cures. I must stress the point that open resentment by snarling, swearing, or even throwing one's net book on the floor in a fit of pique and disgust will get you nowhere, in fact it will more often than not lead to quarrels, tears, door slamming, even packing of suit cases and the threat of going home to mother. Not knowing of any sure cures, I can only give my method in the hope that it will work for you as simply as it did for me. The first cure is showing signs of coming good. I simply stand on a suitable chair and look her straight in the eyes and order her from the room in very stern tones. This usually works very well, although there have been occasional times when I have missed the band opening entirely because the audience was late in arriving, and sometimes the stitches have taken the doctor a little time to fix up. Some of the gang solve the trouble by evading the issue by not reaching on the 12, or by the time they regard as sheer cowardice, don't you? But way, have there been any band openings lately?

For almost 12 months now the VK5 Division has sported themselves a Journal. Posted out to the membership at various intervals, it has provided a wide range of both news and the country members. Improving each issue, it is a credit to all responsible, especially the Editor, who should be commended for his little paper, and as much as I dislike Editors and their little red pencils, I cannot bring myself to withhold praise when it is so deserved. One line in the issue of the magazine ("A.R.") saw fit to reprint correctly a paragraph from the journal, and gave credit as well. Can VK5 ask for any more?

Checking these notes before putting them to bed for this month, I am somewhat ashamed to note that quite a deal of "padding" is apparent in them. However, with no news from my spot in Mount Gambier, or Renmark, in hand, I feel that I am justified in allowing my imagination to run riot in an endeavour to keep the notes of more than one page. The Editor, bless his little red pencil, will probably be so dehydrated following his trip to Alice Springs, that he will lack the energy to take the necessary action, plus the fact that he is well aware that I am of too modest a nature to impose on his noble generosity. Just as well, Ron, as it is not the present Editor, he took some blurring, the tyrant. Still, what could one expect from someone who gave his old chassis to short-wave listeners to save tipping the dustbin. Vive le VK5!

## WESTERN AUSTRALIA

Well chaps here we are again after an absence of one month. I had a very nice holiday and worked lots of portable. The reception was very good along the coast. The weather could, despite, no QRM and the Eastern States all roll in 5 x 9 plus. I would certainly like that up here at my QTH. Other calls heard were Herb 6X, Ted 6/G, SMX and 6WD conversing at Waterman's Bay. Francis still has quite a bad throat by the sound of it, but the visiting brings him some cheers and 73 from the gang on the OW band. It does not look as if 1961 has got off to a good start at all, with the breach between the W.A. and W.V. Group apparently growing wider, owing to certain people on each side holding grudges of what happened back in 1956, and of their pig-headedness now in 1961.

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Both the names of the V.H.f. Group and the W.L.A. band seem to be proud of, and no one group should want to claim sole status of the other in any way. I feel agreement could be reached to the benefit of both parties with both the parties to the same another. Quote: "Together we stand, etc."

The V.H.f. Group gives the W.L.A. a reason for not wanting to come in with them, and that is that certain members of the Council of the W.L.A. are not liked by them, owing to their supposed dislike of the V.H.f. Group and of the other things they have done in the past. Group in the past. All members of the W.L.A. Council were elected by all members of the W.L.A., some of whom are members of the V.H.f. Group. It is now that most of the members did not cast votes, therefore it was assumed that each and every member who did not vote did not accept the Council of the W.L.A. did not, I feel sure they would have voted against, seeing as some Council members have been in office for many years. These men have devoted many of their spare hours to the promotion of Amateur Radio and the only remuneration they receive is the "Progress" of our "Great Hobby," yet we see members on the outside who are not prepared to devote any of their spare time to the administration of the Institute but criticise the way in which it is run.

To these members I say it is in your power to rectify this by taking some personal interest in your administration. I am sure that a greater number of members and new members took a more active part in both the W.L.A. and V.H.f. Groups, the older members of each group would find it more pleasant to run into the future and leave their grudges back in 1956 where they belong and a sensible grievance reached as to the future of Amateur Radio in W.A.

In conclusion, it should be noted that this is the only State in which the Amateurs are divided into two groups.

Again I have not received any news from country Amateurs or city Amateurs regarding their activities, which makes the writing of these notes very hard. Have a look at my notes and let us see if we can get our sound like theirs instead of the tone our notes have taken.

Well chaps, after this outburst, I suppose this is the last time I will be asked to write the notes, but I thought, as you have the ALL net together as one body for the future of Amateur Radio as a whole, so I hope this does some good.—GPH.

## TASMANIA

Those members who helped with the Scout Jamboozie in Hobart, and the visit of the boys from the Hobart area met in person both Amateurs who assisted in other States, and boys who spoke to our lads. These meetings took place at the Jamboozie in VK2 early in January this year.

Bill 7TY became established at Bond Bay, Port Davey, as from 1st February, 1961, for a period of three months. Bill can be heard on both 3.5 and 1 Mc., as well as under the call sign 8TAC on the appropriate out-station frequency.

The Club Room Fund-raising Committee held two functions in the month of January. One function was held in the bus station, and Barney 7ZAK hid the tx's in a quarry behind Snug, and it took three hours to find them. The Committee is delighted at the increased bar-becue business of the Division finding, and by way of mobile gear shown at this function, and we encourage all members to do something about both forms of activity. In excess of £5/10/6 was raised for the Fund. The second function was a social evening to hear a tape from George 7GP dealing with his trip around the world. He showed the 85 excellent slides of that trip. The gathering thoroughly enjoyed the presentation, and £2/17/- was raised.

At the February meeting of the Division, we were honoured by yet another address from Dr. Grote Rever on the subject of radio noise from the home, the office, the car, the radio, and the knowledge and an ability to reduce that knowledge to a level understood by the intelligent amateur, made this lecture really memorable. Dr. Rever expects to be in Tasmania for several years, so we confidently look forward to further absorbing addresses from him.

Remember the Annual Dinner to follow the Annual General Meeting on 25th March. This year, a lady partner for each member can be brought, as long as they have the 800 music, dinner and supper taken care of, in addition to the usual forms of conviviality. So come along and make this dinner an occasion to remember.

Band conditions have been generally poor for the past month, that is for the bands 20 Mc. and below. With static lessening however, the 3.5 Mc. band is becoming really the most satisfactory of them all, and I was delighted to work VK4DX on the band on 2nd and 3rd.

We were very pleased to welcome Dennis TDR and Harold 7MZ to our February meeting. Chen BVHPT hopes soon to visit AUS, and below. With static lessening however, the hope of meeting operators personally in the not too distant future.—TZZ.

## NORTH WESTERN ZONE

Disastrous news! Our President, Max 7MX, got himself some rare DX last month in the form of "Mumps". Sincerely hope you are now fully recovered Max and none the worse for the ordeal.

We had a tx hunt in January, which was usual was run in two sections. Syd 78F was duly hidden away and transmitting very loudly at the appointed time from the first run, and George 7XL was not a great while in "scenting" him out. All participants were soon on the scene and we adjourned to the main beach area at Ulverston for a picnic dinner. George had a very secluded hideout for the afternoon run, amongst all the blood-sucking wogs imaginable. Anyway, more fun than anything, your truly found him first and had to hide for first run on 19th Feb, but more of that later.

The radio control units, etc., for the Burnie Fire Brigade are at last giving full assistance to the Brigade and everything in the garden is looking lovely, special thanks to Len 7CP for the finished copies he carried out.

Our first meeting for the New Year was held on 7th Feb. and 14 members were present. You can well imagine there was plenty to talk about after the Xmas break. As usual, and after a small auction affairs were wound up reasonably early. I believe quite a number of members are contemplating visiting Hobart for the Annual Dinner later this month.

Haven't heard many of the local chaps on the air over the past few months, though I take a listen most nights. David 7MS says he's reduced his long wire to a little over 500 feet and is getting quite good results in some directions, some not just with the cage though. Ken 7AI is still using his share of the band with his "duck talking" machine; and I'm glad to believe the other 7AP, a little off resonance at a wine tasting affair recently.

Bob 7ZAA hopes to be on 6 m x very shortly; you'll be able to have a real local QSO George. I have heard that the 1000 ft. tower from our fair city, so he must have the rig somewhere near a power point. George 7XL seems to be on a spot of leave and was heard transmitting from the first time in over a year. I called on Max 7MX one night and found him at his favourite part-time of swapping with his friends from the 1000 ft. a few words, too. See you all at the dinner.

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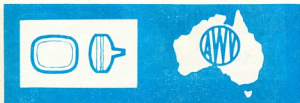
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